



# Pathways to a competitive future

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## Antwerp case study

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Urban Land  
Institute

## About ULI

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The Urban Land Institute (ULI) is a non-profit research and education organisation supported by its members. Founded in Chicago in 1936, the Institute now has over 38,000 members in 82 countries worldwide, representing the entire spectrum of land use and real estate development disciplines, working in private enterprise and public service.

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ULI Belgium has over 140 members and is chaired by Marnix Galle, CEO of Allfin.

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- Advancing land use policies and design practices that respect the uniqueness of both the built and natural environments
- Sharing knowledge through education, applied research, publishing, and electronic media
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This case study is designed to be read alongside the reports *Brussels and Antwerp: pathways to a competitive future* and *Pathways to a competitive future: Brussels case study*. Both are available on the ULI Europe website, [Europe.uli.org](http://Europe.uli.org).

## About This Report

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This case study of Antwerp contributes to the ULI report *Brussels and Antwerp: pathways to a competitive future*, which examines the competitiveness of Brussels and Antwerp. That broader report, this case study, and a case study of Brussels are based on research carried out by ULI in early 2016 that included workshops with ULI members and other public and private sector leaders in Brussels and Antwerp, interviews with Belgian urban specialists, and a review of the two cities against recognised measures of international performance. The broader report and the two case studies are designed to be read together.

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# Executive Summary

In this case study, Antwerp's competitiveness is assessed using a framework (see figure ES-1) that consists of four main elements:

- **governance framework;**
- **competitive climate;**
- **agglomeration;** and
- **attractiveness to talent.**

The following presents a summary of Antwerp's strengths, the threats to its competitiveness, and recommendations for how to improve its competitiveness.

The findings regarding Antwerp's competitive strengths and weaknesses according to the elements of this framework are summarised in figure ES-2. The areas in which Antwerp rates above average are its competitive strengths; those below the average threaten the city's competitiveness.

## Competitive strengths

Antwerp, Belgium's major port city, has a record of investing in its urban core. The city has many competitive advantages over other current and historic European port cities, including the following:

- Cross-sectoral developments that capitalise on the highly competitive port. Many successful, established industries help drive **agglomeration benefits in industry clusters**. Innovative industrial clusters exist in the areas of the digital economy and the circular economy, and these clusters share assets and resources. Promising new sites are being established for digital start-ups and chemical companies.<sup>1</sup>

- A ready pool of **skilled workers**. This labour force supports efforts to build the innovation economy, and new sectors benefit from **support from the city and private investment**.
- An improved **cost and incentives climate** to build the innovation economy. This climate is supported by active engagement from universities and risk capital.
- **Strong leadership**, and the city's status as a regional city. Because Antwerp is not a host for international institutions, geopolitical risks are less of a factor than in Brussels.

Figure ES-1: Competitiveness Framework

Governance framework	Competitive climate	Agglomeration	Attractiveness to talent
Vision, strategy, and coordination	Costs and business investment	Size and scale of internal market	Human capital, liveability, and opportunity
Land use, planning system, and density	Tax and regulatory framework	Clustered specialisations	Innovation, technology, and enterprise
Infrastructure and services	Geopolitical risks	Institutional engagement	Brand, identity, and destination

### Competitive threats

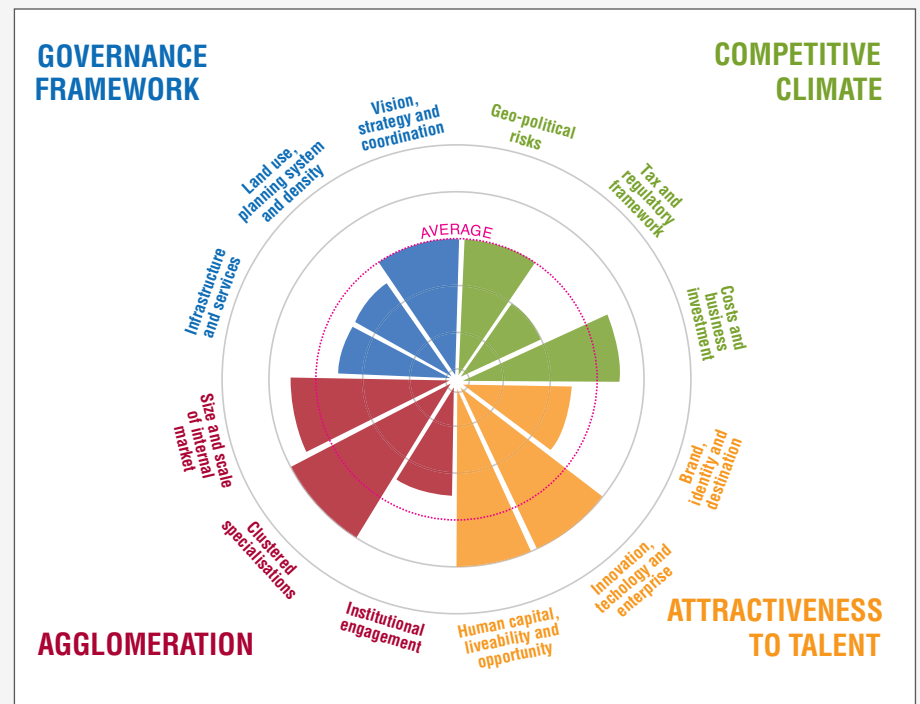
The following are threats to Antwerp's competitive standing:

- **Traffic congestion.** Antwerp is a **relatively car-oriented city** whose 20<sup>th</sup>-century model of development is not well suited to increasing its competitiveness.
- **Limited international profile.** Antwerp's limited international profile is potentially limits the growth of its innovation economy.
- **Need for greater institutional engagement.** Despite the role of the Chamber of Commerce and financial and research stakeholders in ongoing sector developments, institutional engagement, including engagement from knowledge and business institutions, could be improved.
- **Governance fragmentation.** Though not to the same extent as Brussels, fragmentation **at the metropolitan level** makes financial and development issues unduly complex. Also, innovative industries could benefit from more access to small and medium enterprise (SME) finance.

### Recommendations

Like Brussels, Antwerp can take a number of actions to improve the competitiveness of its **governance framework**. These include greater **metropolitan coordination** – development of mechanisms that help Antwerp work with surrounding municipalities not only on transport but also to accommodate and absorb population growth and manage investment and land use change. The city would also benefit from a clear **metropolitan growth strategy** that identifies how and where to densify, and an infrastructure pipeline that shows how future sub-centres will be connected. The city also needs to invest in **transport infrastructure** to catch up with European competitors.

Figure ES-2: Evaluation of Antwerp according to 12 Competitiveness Criteria



To enhance its **competitive climate**, Antwerp can work to **promote social cohesion and city living**. The city has opportunities to engage younger citizens more proactively through new infrastructure that enhances their aspiration for city living.

The city can also build on its already substantial **agglomeration** benefits by supporting sectors of the economy to **develop their profiles and autonomy**. Antwerp needs a resilient, innovation-led economy in the core city as well as the port.<sup>2</sup>

And finally, the city can improve its **attractiveness to talent** by working to **enhance the Antwerp brand**, improving the city's international profile in tourism, business, and innovation.



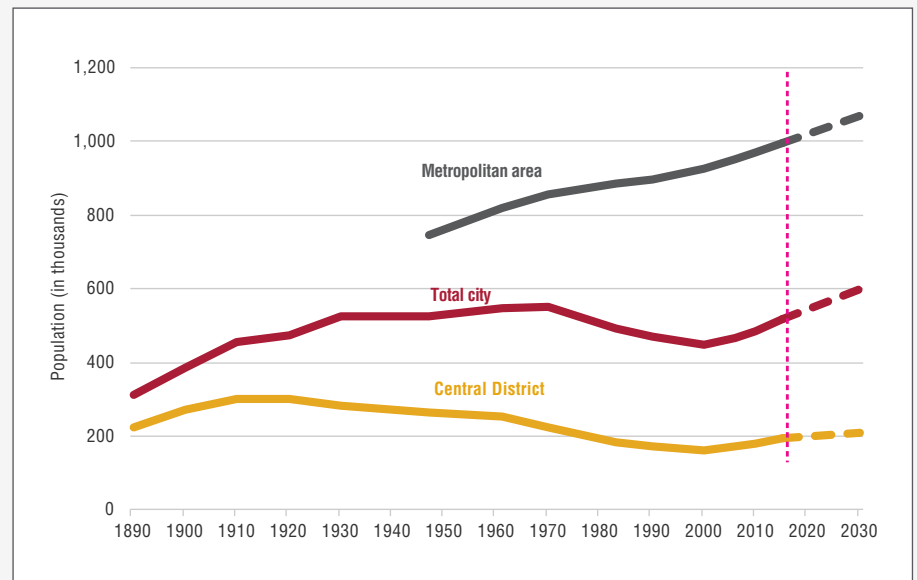
## Antwerp: Past and Present

Antwerp was one of the first truly global cities in modern Europe. The city prospered during the age of exploration in the 16th century, becoming a major trading post and banking centre. Its unique position on the river Scheldt and within the northwest European river system made it the gateway to Europe's trade networks. Although its mantle as trading capital of Europe passed on to Amsterdam and then London, its original assets still shape the city's character and opportunities today.<sup>3,4</sup>

Antwerp's fortunes had revived at the end of the 19th century, and by the 1950s demand was exceeding capacity at its port. A long building boom took place in South Antwerp just as cars became more affordable. The Taeye law of 1948 encouraged private homeownership through state grants and loans. This fostered in Antwerp citizens a deep preference for living in single-family houses at the city fringes rather than in city apartments. The city boundaries were extended, ring roads were built, and new social housing developments and sprawl extended the city's footprint.<sup>5</sup> The threshold between the edge of the city and the wider region became blurred.

By the 1960s, Antwerp's central port had become less competitive than the new installations

**Figure 1: Antwerp's Population Change in the Past 125 Years**



Source: Statistics Belgium; Antwerp City in Figures.<sup>7</sup>

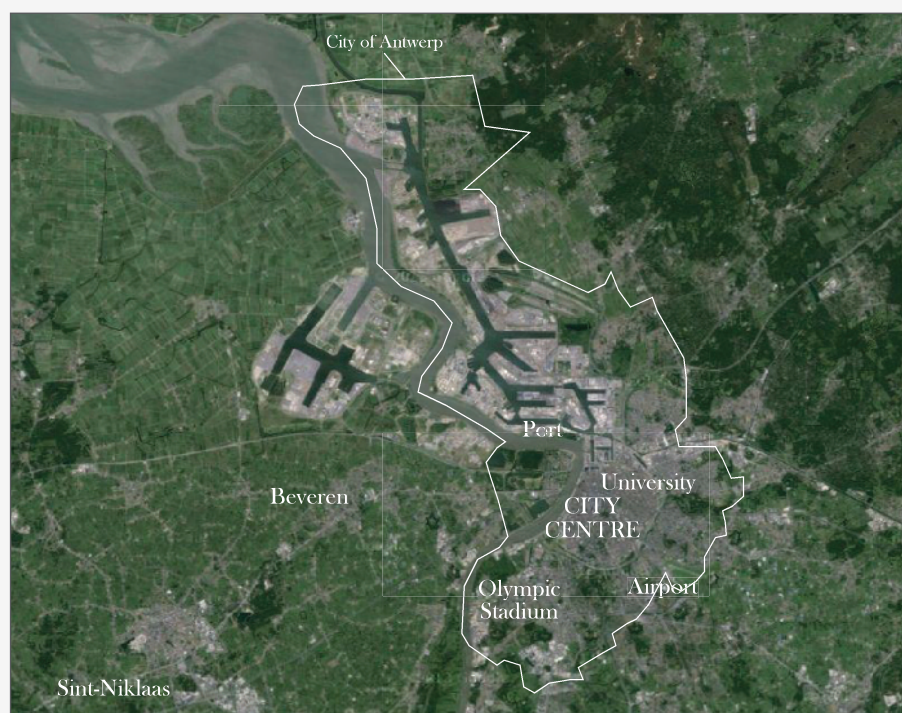
downriver. De-industrialisation began to hit the food processing, electronics, and automotive sectors, and the inner city fell into economic decline. Antwerp lost much of its tax base, and its built fabric fell into disrepair. Around the same time, an opvulregel law on land use was introduced, which encouraged ribbon development on Antwerp's periphery.<sup>6</sup> Although the city of Antwerp began to lose population,

Antwerp's metropolitan population has continued to grow steadily through suburbanisation over the past 40 years (figure 1).

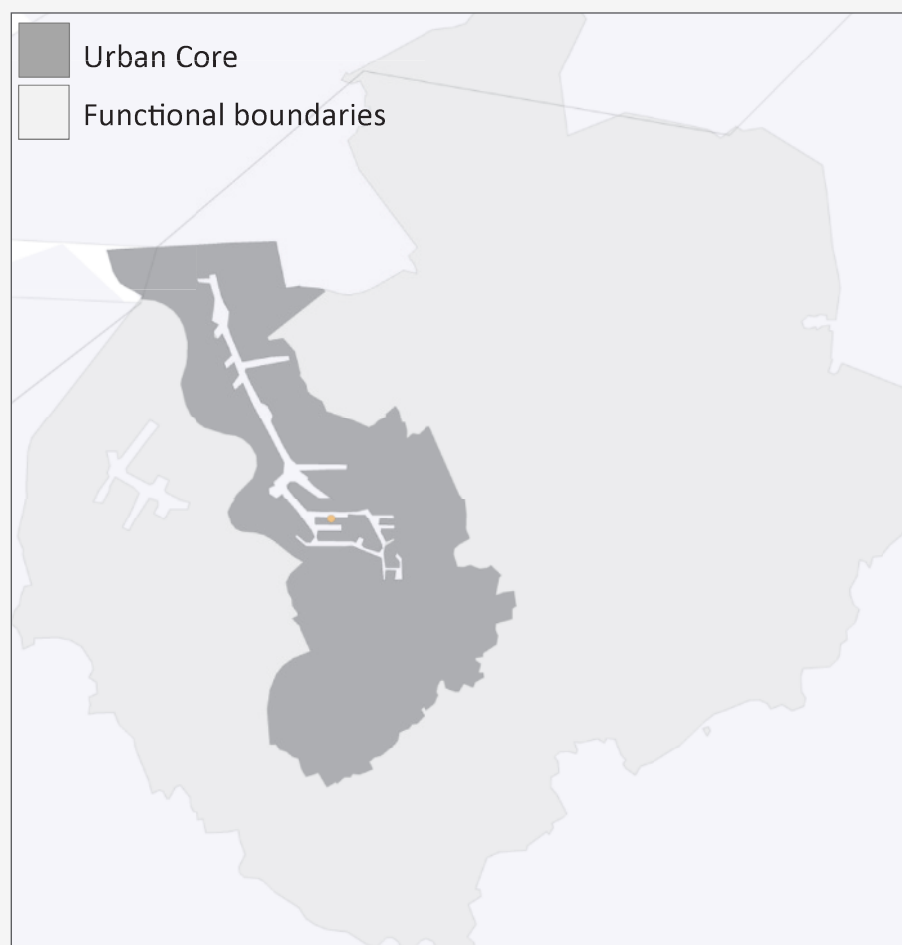
In 1983, Antwerp was extended once again to encompass what are now its nine districts. The merger more than doubled the city's population to nearly 500,000. Antwerp became the first city in Belgium to try to develop a pro-urban policy to make it more attractive to residents and visitors. It began to put in place more integrated approaches to district regeneration, for example in Dambuurt, and focused on pedestrian shopping streets, residential areas, and a tax on vacant land. Social housing was brought back to the city through the Vleeshuis (Meat House) project. But some initial development plans lacked coherence and resources due to the administrative disruption after the merger of the nine districts and suspicion of harmonisation by the city's suburban municipalities. Nevertheless, Antwerp's new policies now emphasised the importance of becoming a liveable city oriented around its river.



The Onze-Lieve-Vrouwekathedraal (Cathedral of our Lady) and the Scheldt river.  
<https://en.wikipedia.org/wiki/Antwerp#/media/File:OLV-Kathedraal.jpg>



Satellite Map of Antwerp. Source: © Google Maps; labels by the Business of Cities Ltd.



Antwerp and its Metropolitan Region. Source: © OECD (2015)<sup>8</sup>

The 1990s saw an increase in Flemish regional funding and European Union support, which enabled bigger interventions to redevelop the city. The Global Structure of Antwerp (1990) spatial plan was accompanied by initiatives such as “City on the River”. After Antwerp was nominated as Europe’s capital of culture in 1993, more private/public collaboration began to revamp the old city into a lively cultural quarter and instruments for redevelopment improved, allowing agencies such as AG VESPA to steer development.<sup>9</sup> Important regeneration was achieved in areas such as Het Eilandje, Park Spoor Noord, De Coninckplein, and Hopland.<sup>10</sup> Urban renewal has seen people start to move back into the city, and the city centre itself has grown by 20 per cent since the turn of the century.<sup>11</sup>

### Antwerp’s economy today

Today, Antwerp has overtaken Hamburg to become Europe’s second-busiest container port after Rotterdam. Up to a quarter of the city’s employment base and nearly half of its gross domestic product is still generated by the port, directly or indirectly. Around 150,000 workers are still employed there. Since the port opened up to foreign direct investment (FDI) and international handling firms at the turn of the century, it has attracted a great deal of investment and is currently undergoing a new cycle of modernisation.<sup>12</sup>

Antwerp’s economy has recovered more strongly than many de-industrialising cities in western Europe, and the country has higher figures for GDP per capita and disposable income than many of its peers. Overspill beyond the amalgamated city means its metropolitan area now exceeds 1 million inhabitants. After two cycles of urban renewal, Antwerp is now a less divided and less unequal city than Brussels, but the legacy of its 20<sup>th</sup>-century development is that much of its affluent population still chooses to live at the edge or outside of the city.



**Figure 2: Antwerp City and Province Economic Sectors**

Economic sector	Sector share of city GDP (%)	Change in share of GDP since 2004 (percentage points)	Sector share of province GDP (%)	Change in share of GDP since 2004 (percentage points)
Trade and logistics	23	-1	21	-2
Manufacturing	21	-3	25	-3
Public sector, human health, and social work	17	+2	17	+2
Professional, scientific, and technical	15	+1	14	+2
Finance	6	+1	4	0
Information/communications technology	3	0	4	+1

Source: National Bank of Belgium, 2013.<sup>15</sup>

Antwerp's economy has become highly diversified well beyond the port, logistics, and the petrochemical cluster: other established sectors include diamonds (the city is home to 80 per cent of the world trade); retail; and the business services sector, which supports all these diverse functions and employs more than 60,000 people.<sup>13</sup> While Brussels absorbs more strategic economic roles and the head offices of major corporations,<sup>14</sup> Antwerp is now building dynamic digital, circular, and creative economies with the potential for cross-pollination.

International indexes also emphasise Antwerp's prospects for future growth: in 2016, it ranked eighth among medium-sized cities in Europe for economic potential, ahead of Glasgow and behind Cologne, and it is also rated the 35<sup>th</sup>-most-dynamic city in Europe among a basket of 100 cities.<sup>16</sup>



## Antwerp City Competitiveness

In this section, Antwerp's competitiveness is assessed using a framework that consists of four main elements:

- **governance framework;**
- **competitive climate;**
- **agglomeration;** and
- **attractiveness to talent.**

### Governance framework

#### Vision, strategy, and coordination

Despite many changes to the governance framework over time, citywide coordination in Antwerp has historically been hard to achieve. District boundaries have had a poor fit with the city's physical and social profile, and the division of competences between the city and districts has often been unclear.

But coordination has improved in the past decade. Since the election of a coalition led by Patrick Janssens in 2003, city leadership is seen to be more professional, proactive, and experienced in delivering key projects. Antwerp's politics are perceived to be moving towards a

more entrepreneurial ethos focused on achieving job security and prosperity. Many commentators highlight Antwerp's strong and visionary leaders, including Mayor Bart de Wever, who is prepared to bring forward large-scale and ambitious projects.

Belgium's complex multilevel governance framework has constituted a historic disadvantage for Antwerp in the coordination of policy and investment. Historically in Belgian and Flemish policy, cities have not been a major focus, and an anti-urban attitude has tended to prevail.<sup>17</sup> But since a Flemish minister of urban policy was appointed 20 years ago, urban

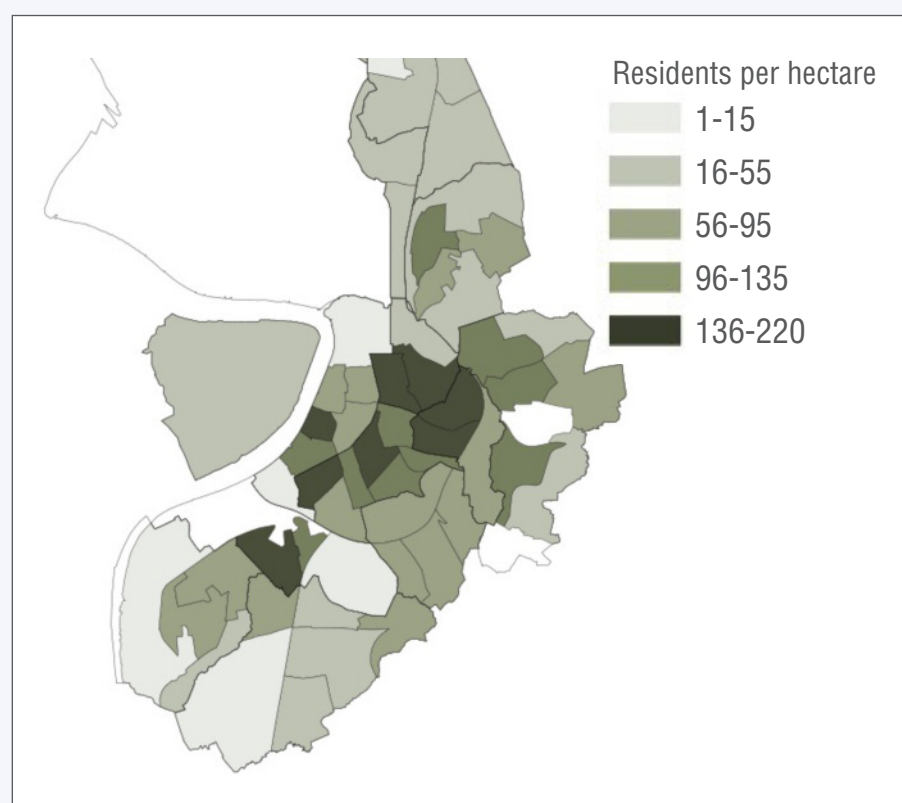
revitalisation and cohesion have become a Flemish government priority.

As a result of improving governance and leadership, Antwerp's vision and strategy have also become clearer and stronger. The economic strategy is not just to become more competitive, but also to move up value chains so that the city's industries can become self-sustaining and less reliant on foreign investment. The vision is to become a strategic partner for large shipping- and maritime-based organisations opening up branch operations so that it can help manage the entire value chain and offer smart logistics.



**Figure 3: Antwerp's Core City Density Compared with European Peers**

City	Size of core km <sup>2</sup>	Density per km <sup>2</sup>
Manchester	116	4,350
Liverpool	111	3,890
Bristol	110	3,890
Toulouse	120	3,870
Utrecht	99	3,510
Marseille	240	3,500
<b>Antwerp (exc. Berendrecht-Zandvliet-Lillo)</b>	<b>151</b>	<b>3,270</b>
Helsinki	193	2,930
Gdansk	262	1,770

**Figure 4: Antwerp Density Profile, 2015**

Source: © City of Antwerp (2015)<sup>19</sup>

This approach has informed the Antwerp Chamber of Commerce's "Roadmap 2020", which aims to create a smart region. The document highlights a vision which recognises Antwerp's traditional sectors, but also highlights the sectors that the business community sees as key to the region's future growth. There is increasing alignment among the public and private sectors around this economic vision, and shared approaches to reinvent the established industries through the impact of digital and circular-economy technologies.<sup>18</sup>

Antwerp's performance in this regard has therefore improved, albeit from a below-average position, given the horizontal and vertical governance obstacles to achieving a shared vision and strategy for economic development.

#### Land use, planning, and density

Antwerp has only a partial record of delivering attractive higher density, and the rationalisation of land use will be important to its next cycle of competitiveness. The city has a medium-density core, surrounded by a broad expanse of suburbs to the south and east. The core supports the proximity and cluster effects enjoyed by creative industries and younger people, while also retaining a green and liveable environment. But the many suburbs and the large swathes of port land mean that Antwerp's gross density is lower than that of many peer cities (see figure 3). Efforts in the 20th century to create medium density in the suburbs were rarely supported by public transport, and the process of suburbanisation and car dependence is still very visible.



Antwerp does not have a chronic problem with housing supply and affordability,<sup>20</sup> but the city is expected to absorb 30,000 new residents up to 2030, which will require building new homes as well as adding public services, schools, retirement homes, and cultural amenities.<sup>21</sup> The city has begun to take the need for densification more seriously. So far it has picked the low-hanging fruit – the vacant lots or easily convertible sites where opposition to intensification has been minimal. Antwerp's former city centre dock Het Eilandje has been through nearly 25 years of active revival, with the city government retaining a strong steering role.<sup>22</sup> An iconic example of rehabilitation is Park Spoor Noord; similar projects coming up include reclamation of the East Rail site and the Northern Rail Kop.



In the future, new sites in the city centre will be harder to bring forward, but the city council accepts the need to activate and densify other areas. It is currently working on an update of its 2006 Spatial Structure Plan to this effect. The original plan highlighted that Antwerp needs to capitalise on the fact it is a city of water, of railways, and of multiple villages within a metropolis.<sup>23</sup> Today, the Singel railway arches are to be activated as real estate, and work on the old quays and river banks are bringing more elements of the Scheldt into mixed use.<sup>24</sup>

Antwerp is now actively exploring ways to densify in an arc of development just beyond the ring road to give those areas an urban mix and greater housing capacity without sacrificing their character. The city is yet to agree whether to pursue critical mass in a handful of centres along this arc or go for a more dispersed “micro-centres” approach.

Currently, there are the familiar stumbling blocks of financial feasibility and the ability to bring together private stakeholders to engage in joint ventures.<sup>25</sup> The city also is experiencing some resistance to densification from businesses that cite concerns over safety or parking spaces.

Overall, Antwerp is slightly below average in this criterion of competitiveness because of its low aggregate density, relatively limited record of densification, and the absence of a fully agreed and deliverable approach to the next cycle of growth and redevelopment.

‘Based on the pattern of urbanisation in Antwerp, we clearly see three structures and not two. The centre is undergoing a revival, more or less within the city ring road. At the green edge of the city . . . it is sparsely populated, and much of it is outside the administrative borders. In between is a third region, an intermediate area of the “20th century belt”. It is literally a grey area. It is widely built up, with few green qualities and largely composed of mono-functional residential areas. Will the city lose its future residents to the green edge or will the 20th century belt join the fight? . . . How can the 20th century belt win the battle between “urbs and suburbs?”’

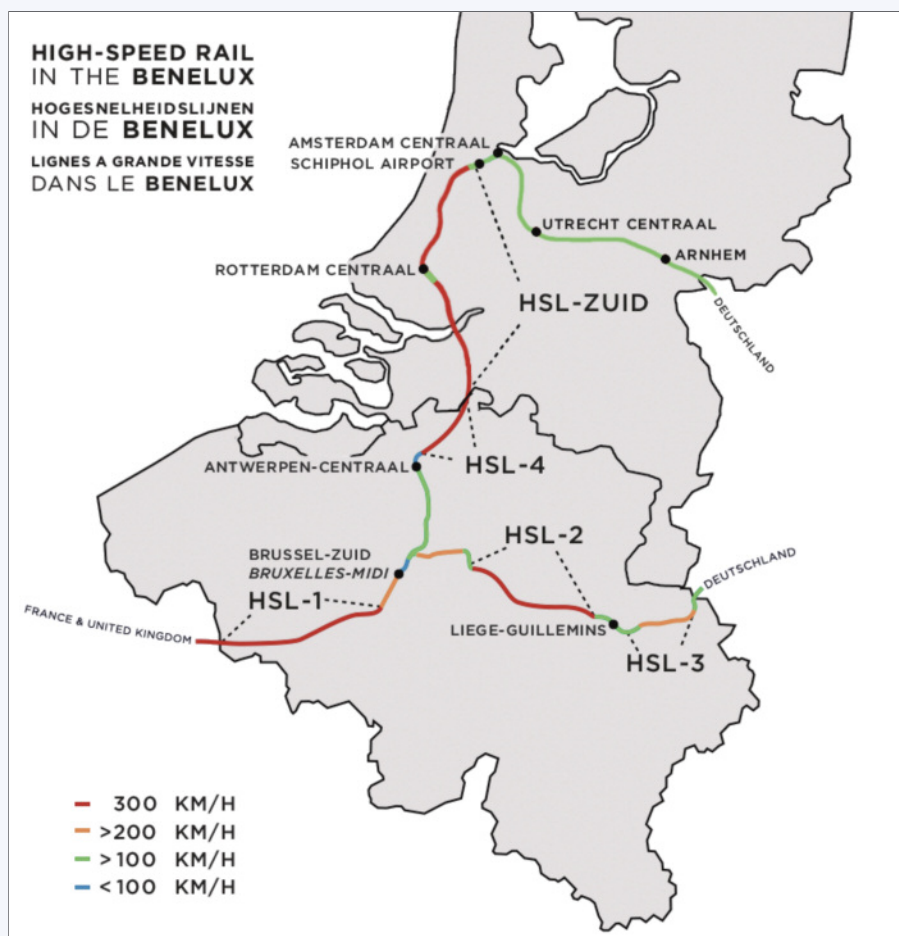
**Maat onwerpers, Posad, Shinsekai Analysis and 3E, for Antwerp’s Labo XX, 2014**

### Infrastructure and services

Antwerp's infrastructure system has the potential to be very competitive but requires investment in regional capacity to gain flexibility and multimodality, and to promote a better quality of life. The city has strong logistics and inter-city links, but transport congestion within the city itself and historic underinvestment in public transport means that current investment is only beginning to catch up with the systems in other peer cities.

Efficient road, rail, and barge transport in and out of the port shapes much of Antwerp's transport priorities and spending. The rate of investment to upgrade the port over the next decade is high – €1.5 billion in funding is earmarked for the 2015–2025 period.<sup>26</sup> Deurganck Lock is being enlarged to raise capacity and will make the left bank much more accessible to the next generation of ships.<sup>27</sup> This is complemented by a new logistics park in the southwest of the left bank, and surveys are being carried out on a new 1,000-hectare development zone on the same side.

Antwerp's logistics credentials are reinforced by its regional rail links. It is roughly 30 minutes by train from Rotterdam, 70 minutes from Amsterdam, 80 minutes from Lille, and under three hours from Cologne. Links to the national airport, Brussels, and the regional system of cities have been improved with the €700 million Diabolo line. Antwerp's travel time to the airport is now just 30 minutes, and a new railway bypass is set to grow passenger numbers on the Brussels-Antwerp-Netherlands routes (see map).



High-speed rail network in Belgium and the Netherlands.<sup>30</sup>

Source: Sergio Georgini (2009); file released to the public domain.

Meanwhile, the new 16-kilometre Liefkenshoek rail tunnel now links both sides of the Scheldt and boosts the port's freight connectivity with Europe's rail network.<sup>28</sup> However, there is need for additional freight railway capacity given the intensity of demand and the proximity of existing lines to residential areas. A second 28-kilometre rail line to the port on the right bank between northern Antwerp and Lier is being evaluated as a solution to relieve strain on existing lines.<sup>29</sup>

The major deficit is the fact that Antwerp is very congested and public transport was neglected for several decades in the 20<sup>th</sup> century. A fondness for the private car persists amongst the baby-boomer generation, and 44 per cent of workers drive each day to work.<sup>31</sup> It is the second-most-congested city in Europe and North America in INRIX's real-time traffic scorecard. This situation is reinforced by tax advantages for company cars and by some private sector employers who have become "locked in" to the norm of locating themselves by motorways.



New projects are focused on “catching up” with the deficit:

- A growing tram network is proving to be a reasonably effective substitute for a metropolitan rail system, having expanded rapidly since the 2006 spatial plan came into force. The current network is about 75 kilometres long in total, with another 30 kilometres to be added. The Flemish government dedicated around €7 billion to Antwerp’s infrastructure in Masterplan 2020, mostly allocated to public/private partnership (PPP) projects and new rolling stock.<sup>32</sup> Probably the biggest new tram project is the new €200 million Northern Line (also known as Brabo 2), which will come on line as early as 2019. It provides a rapid tram connection from the northern ring road to the city centre and provides a makeover for the areas of Opera Square and the Rooseveltplaats.<sup>33</sup>

- Given the volume of traffic and number of accidents around the Antwerp ring road system, a third Scheldt river crossing is a key priority to complement the Kennedy Tunnel and the new Liefkenshoektunnel. The planned tunnel aims to finally complete the Antwerp ring road after many years of delays, and will also help the new hubs of innovation that are located in the south of the city. There was some concern that a new distance-based toll system introduced for trucks travelling in Belgium starting in April 2016 might place the port at a competitive disadvantage, but an assessment by the University of Antwerp found that this would not be the case.<sup>34</sup>

Two other areas of competitive promise exist when it comes to Antwerp’s infrastructure. First, the city has a high uptake of cycling and journeys on foot, especially among younger generations.<sup>35</sup> The city ranks fifth in Europe for

bicycle-friendliness, with nearly a quarter of trips made by bicycle, not far behind Copenhagen, and cycle paths remain a key city priority. Second, Antwerp is also pioneering smart solutions to improve the performance of existing road capacity. The city has many structural bottlenecks at key junctions and intersections, and smarter traffic control mechanisms are being pursued more actively in Antwerp than in many other cities.<sup>36</sup>

Overall, Antwerp’s infrastructure fell a long way behind in previous cycles and is only catching up now. For the city to think about moving ahead of competitors in this area, it will need to accelerate progress on longer radial tram lines as well as tangential lines in the “20<sup>th</sup>-century belt”, move forward with cycle and water transport, become a genuine leader in smart logistics, and build successful multimodal hubs that combine park-and-ride, light rail, tram, and bicycle access.





## Competitive climate

### Costs and business investment

The cost of doing business in Antwerp is competitive and is not viewed as a deterrent to business or investment. Businesses in the industrial and logistics markets remain very active, especially the large industrial chemical firm. The port has recently entered into agreements with the Industrial and Commercial Bank of China to attract Chinese investors to the Port of Antwerp and related investment opportunities.<sup>37</sup> High business investment at and around the port has helped improve the productivity of port firms.

Meanwhile, office stock is relatively inexpensive: demand for new office space has been very high since 2014, but office prime rents are only about 50 to 60 per cent of those in Brussels.<sup>38</sup> The city also attracts significant investment in hotels and

retail; the city registers a strong retail presence – 43<sup>rd</sup> in Europe (ahead of Bordeaux and Edinburgh) and 55<sup>th</sup> globally in recent rankings.<sup>39,40</sup> In general, rents and labour costs are competitive, especially in relation to the high productivity of the labour force.

Commentators have observed that Antwerp relies heavily on foreign investment to fuel development of its key sectors. The aim is for these sectors to develop their own self-sustaining financial ecosystems. The availability of capital investment is fairly wide, including from banks, private equity, and venture capital. Meanwhile, the Flemish region-owned company PMV invests in equity and provides credit guarantees to a mix of firms in order to improve access to finance.<sup>41</sup>

### Tax and regulatory framework

Antwerp's regulatory framework is made unduly complex and inefficient by overlapping regulations at different tiers of government. Investors in Antwerp have to face the complex regulation and land ownership rules that result from multiple tiers of government. Perception at the ULI workshop was that the time and money it costs foreign investors to learn which tier is responsible for different regulations can act as a deterrent. While this institutional fragmentation is not uncommon in other cities, many others have managed to overcome any negative impacts on investors by integrating information at a single point and providing support services that effectively reduce the complexity.





Antwerp's framework for business has begun to improve in recent years and is boosted by investment incentives and tax subsidies from the Belgian and Flemish governments that are linked to employment, training, and research and development. The tax environment in Antwerp offers deduction of risk capital, advance tax rulings to provide clarity and confidence, and subsidies for environmentally friendly technology. Overall, however, the regulatory burden that results from intergovernmental issues means this is an area of competitive disadvantage for Antwerp.

### Geopolitical risks

Antwerp inherits three distinctive political and geopolitical risks: uncertainty about the federal state, potentially increased risk of terrorism, and concerns around social cohesion. Overall, these risks are not viewed to be damaging to competitiveness, but are a source of some uncertainty internationally.

Mayor de Wever is seen by many as the most capable politician in Belgium, and under his

influential leadership the city is perceived to have effectively addressed law and order, and terrorism. However, separate from his role as mayor, de Wever is also a leading Flemish separatist, and some commentators have observed that Antwerp's role in the discord between Belgium's right-leaning, Dutch-speaking north and the more Socialist, French-speaking south has become more prominent. Although the support for Flemish autonomy for 2019 is growing, a pragmatic majority appears to see the ever-present conflict between the Belgian regions as little more than a backdrop to everyday life. Many Belgians foresee little likelihood of change in the near future and believe separatism is perceived as a more significant issue abroad than it is internally.<sup>42</sup>

Instead, the feedback from the ULI workshop and expert consultation suggest that the biggest issues arising from the Belgian federal system are inefficiency and overregulation, which act as disincentives to investors and prevent Antwerp from being able to build a compelling identity and purpose. Uncertainty surrounding the federal

state prevents long-term relationships or strategies with Belgian cities from taking hold. In this respect, geopolitical risks are a disadvantage to Antwerp. In the future, in an even more highly devolved system, Antwerp will need strategies to engage its own younger citizens in a common vision for a competitive future.

Antwerp is also a diverse and multicultural city. One-fifth of its population is foreign born. Districts such as Antwerpen-Noord, Borgerhout, and Deurne are recognised for their diversity, including people of Chinese, Turkish, Moroccan, and Portuguese descent.<sup>43</sup> The Jewish population – which numbers about 40,000 – is closely connected with the city's diamond sector. It remains culturally highly distinct and is perceived by some to be poorly integrated, but is not generally seen as a factor in geopolitical risks in the city.<sup>44</sup>

## Agglomeration

### Size and scale of internal market

Antwerp's internal market is relatively small, at just over 1 million people in its metropolitan region and less than 2 million in the wider province. However, the capacity for productive agglomeration to take place is greatly enhanced by the diverse and cross-fertilising port activities taking place, the increasing integration of the value chain, and the improved links among the port, the city, and other areas of northern Belgium and the Netherlands. The combined clusters of port/logistics/energy/infrastructure and fashion/jewellery/diamonds provide mutually reinforcing scale. This provides a competitive advantage over some peer cities which are unable to "borrow" scale in quite the same way because they lack the long-distance transport and sectoral integration.

### Clustered specialisations

Antwerp's competitiveness benefits strongly from a handful of clustered specialisations that drive the city's future innovation economy. These specialisations – circular economy, digital economy and tech startups, creative economy – all receive more targeted support and have the potential to become mature, self-regulating ecosystems for a long time to come.

### Circular economy

The circular economy is an important element of Antwerp's future economy, closely linked to its port functions and its oil and chemical cluster. The term describes an economy of zero waste, where products, components, and materials are managed (by design) to circulate continuously at

their highest utility and value.<sup>45</sup> Cleantech, waste management, and sustainable chemistry are the keynotes of Antwerp's circular economy, not least because the city has one of the largest integrated chemical clusters in Europe, plugged in to the port. The city has specialisations across the whole value chain from raw materials to final products, clustered along the right and left banks of the port, and companies within the chain share costs and services. FISCH, Flanders Innovation Hub for Sustainable Chemistry, is an important hub for innovation in sustainable chemistry, where companies of all sizes experiment collaboratively in a "plug and play" model to find sustainable chemical and bio chemical solutions and build new value chains.

**Figure 5: Size and Productivity of Antwerp's Peer Cities**

	Metro population (millions)	GDP (\$US bn)	GDP per capita (\$US thousand)
Calgary	1.4	97	69
Utrecht	0.8	38	51
Helsinki	1.6	77	48
<b>Antwerp</b>	<b>1.0</b>	<b>49.5</b>	<b>46</b>
Bristol	1.1	48	42
Genoa	0.7	29	41
Gothenburg	1.0	40	40
Marseille	1.7	60	36
Rotterdam	2.1	77	36
Manchester	2.6	92	35
Auckland	1.5	49.5	32
Liverpool	2.0	66	32
Lille	3.2	98.5	30
Gdansk	1.1	30	27

Sources: Brookings Global Metro Monitor; OECD Stat.



**Blue Gate Antwerp**

The city of Antwerp, Antwerp Port Authority, University of Antwerp, VITO (a knowledge institution), PMV (a provider of risk capital), Deloitte, POM Antwerp (a local developer), and FISCH have recently announced a collaboration on the launch of BlueChem, a new 4,000-square-meter incubator for sustainable chemistry, supporting the city's growing expertise in the circular economy. BlueChem will be located at Blue Gate Antwerp, a brownfield site next to the river Scheldt and only two kilometres from the city centre that is being redeveloped as a business and logistics park. With financial and administrative support and move-on space, the accelerator may host up to 50 companies employing up to 1,600 people over the next ten years. The project's main focus is establishing the city's position as an expert in managing chemical waste and by-products, including biomass, energy, and water. Flanders Region is highly supportive of the initiative, providing much of the finance, while the city itself is contributing €4 million.<sup>46</sup>

Aside from oil and chemicals, other sectors in the city are also becoming pioneers in the circular economy. For example, the fashion sector is now redesigning products and services with a sophisticated understanding of the ways customers use and then dispose of them. Antwerp is a city at the leading edge of change in this area.

*Digital economy and tech start-ups*

Antwerp also has an improving ecosystem for digital businesses to start up and grow. Private incubators such as Startit@KBC and Telenet Idealabs offer startup companies a location as well as financial and operational advice. For up-and-coming companies that have passed the startup phase, the city of Antwerp has launched an important new initiative called StartupVillage to provide them with an affordable and vibrant location. The city has invested in the renovation of a 3,300-square-metre building in the city centre where growing companies can also rent offices at below-market rates for a maximum of three years. The two incubators that will be located in StartupVillage focus on information technology applications for the logistics sector and e-health (in an incubator called BlueHealth).

*Creative economy*

The third pillar of Antwerp's future innovation economy is the creative economy, with a particular focus on fashion and design, but also other creative industries. The fashion cluster has the most mature clustered specialisation: the fashion department at the Royal Academy of Fine Arts has been an incubator for Antwerp's older generation of leading designers, the most famous of whom are known as the "Antwerp Six". The academy is regarded on a par with Central Saint Martins in London, and many Antwerp-trained designers now play important roles in international fashion brands (for example, Dior, Theory, and Chanel). The cluster has been strengthened by the decision of designer fashion, jewellery, and antique brands to locate in Antwerp and even open retail stores because of affordable rents.<sup>47</sup>

Antwerp is now home to more than 1,400 fashion companies which employ around 5,000 people, and the industry helps generate revenue in other sectors, notably distribution, logistics, and tourism. Experts in the field argue that the city should build its profile of fashion events and that the academy should play a stronger training role to ensure that fewer designers leave to work abroad.<sup>48</sup> However, the city's fashion offering will remain distinct from those of the global fashion capitals, and Antwerp is often referred to as a "beta" city – a testing ground for experimental ideas which are then exported elsewhere.

Antwerp's fashion industry success has catalysed growth in design, new media, music, audiovisual media, advertising, print media, architecture, and other cultural occupations. The city has about 9,000 small companies in the creative sector employing nearly 20,000 people. Antwerp does not have a creative district as such, and creative companies are spread over several areas in the city. Advertising and digital firms are located around the Southern Docks, the print media clusters in the Zurenborg district, while design and architect companies prefer the area around Mutsaardstraat.<sup>50</sup> In order to give more visibility to the creative economy, the city of Antwerp is building a creative headquarters where creative entrepreneurs can meet and show their work. It will include an auditorium for 150 people; a multifunctional space for workshops, concerts, expositions; and a café.<sup>51</sup>

Figure 6: Annual Turnover in Flander's Creative Industries

Sector	Turnover (€bn)
Fashion	7.6
Architecture	4.6
Publishing	4.5
Audiovisual media	2.1
Advertising and communications	1.5
Music	1.5
Performing arts	1.4
Design	0.4





Advertisement for Antwerp: Powered by Creatives, the design platform for the province of Antwerp.  
Source: YouTube image available at <https://i.ytimg.com/vi/4eLZc5MXPBw/maxresdefault.jpg>.

Each of these clustered specialisations represents a competitive advantage, and overall Antwerp benefits from more established high-potential clusters than its peer cities. The challenge is to create visibility and internationalise the individual ecosystems beyond the relatively small Belgian economy. According to the ULI workshop and interviews, it is not thought that talent or land – typical

constraints in other cities – are holding back growth. Investment capital is perceived to be relatively abundant, but often comes from outside Belgium. As a result, the city is focusing on moving up value chains, with the aim of ensuring that more headquarters – and therefore strategic decision making – are located within the city itself, lending a greater degree of autonomy to Antwerp's economy.

### Institutional engagement

Antwerp's business, university, and civic leadership does not yet play quite as active a role in the competitiveness agenda of the city as it does in many other cities of similar size and assets. It is partly as a result of this that advocacy for long-term and metropolitan-scale economic and spatial development has been rather slow in coming forward. However, clustered agglomeration in Antwerp and around the port is supported by actively engaged institutions and organisations. The Flemish enterprise network Voka–Antwerp-Waasland Chamber of Commerce and Industry engages more than 3,000 companies through lobbying and support services, and has prepared the city's Roadmap 2020 to secure the future of the port-related sectors. Meanwhile, research bodies and risk-capital providers are taking a lead in many of the new innovation initiatives such as BlueChem and StartupVillage. As financial and knowledge institutions become more involved and invested in cluster development, this promises to become an area of future competitive advantage.



## Attractiveness to talent

### Population, skills, and education

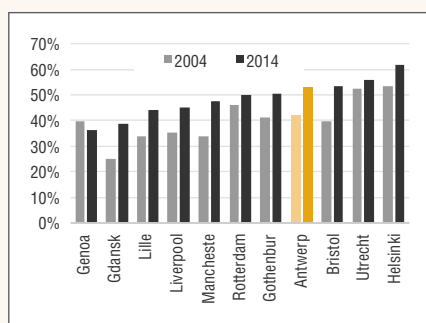
Antwerp does not face the challenges involving skills and talent that many other cities do. The city has a healthy population-growth profile despite the medium-term imperative to attract younger people to counteract its aging population.<sup>52</sup> Relative to the size and scale of its leading industries, the city has a highly educated population with a strong science and technology output, as well as many high-quality postsecondary degree programmes that feed into its established sectors. The city council now explicitly seeks to attract young working and middle-class people in order to contribute to the fiscal and social support of an aging city, and is working to provide the mix of amenities that will sustain them.

### Innovation, technology, and enterprise

Antwerp has strong innovation assets with high potential for crossover and collaboration between established and emerging sectors, and the city has recently begun to leverage this potential more actively. The city was ranked 119<sup>th</sup> out of 500 cities for commercial innovation globally in 2016 by the Innovation Cities Index.<sup>53</sup> This puts it on par with cities such as Eindhoven and Lisbon. Over half its adult population works or studies in science and technology – one of the highest levels in Europe outside Scandinavia and well ahead of other de-industrialised cities such as Gothenburg or Lille. This figure has risen substantially in the past ten years. R&D spending per capita of €1,100 also ranks among the highest in Europe: Antwerp invests more than twice as much as Manchester, Lille, or Gdansk. This ultimately translates into an above-average innovation system.

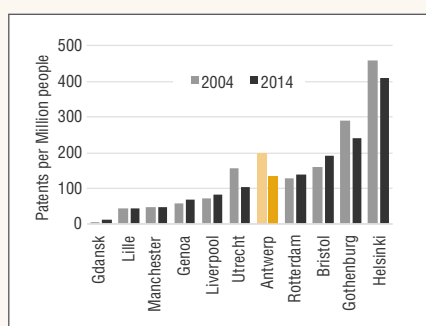
Antwerp's main university, Universiteit Antwerpen is ranked among the top 500 in the world. The city has the largest student population in Flanders with 30,000 students. Degree

Figure 7. Science and Technology Statistics for Antwerp



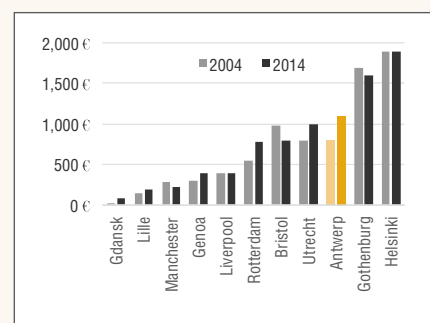
% of active population in Science and Technology jobs or study

Source: Eurostat NUTS2 level. Liverpool and Helsinki 2008 data for 2004;



Patents per million people

Gothenburg 2005 data for 2004; Helsinki data 2008 and 2013.



Human Resources in Science and R&D Spending per capita

Source: Eurostat NUTS 2, Liverpool, Bristol, Utrecht, Antwerp, Gothenburg 2005 data for 2004; Helsinki data 2008 and 2013.

programmes in art, fashion, tropical medicine, shipping, and drama are all highly regarded in the region. The city authorities are increasingly leveraging the universities to direct its output towards applied research to support its innovation economy.<sup>54</sup> The Institute for Technological Research (VITO) and the Institute for Biotechnology (VIB) consolidate expertise in areas such as cleantech, sustainable development, and life sciences. However, these structural collaborations are still a work in progress, and Antwerp is seen as lagging behind its port-city rivals of Rotterdam, Eindhoven, and Delft on university/entrepreneur collaboration.<sup>55</sup>

Antwerp has three clear elements to its future innovation economy: the digital economy, the circular economy, and the creative economy. The number of new innovation spaces being established around the city is very promising and those spaces may become a future driver of employment growth in innovation sectors. Innovation and enterprise should be clear competitive strengths for Antwerp in the next cycle, as long as the visibility, distribution platform, intellectual property systems, and appetite for disruption can be enhanced accordingly.

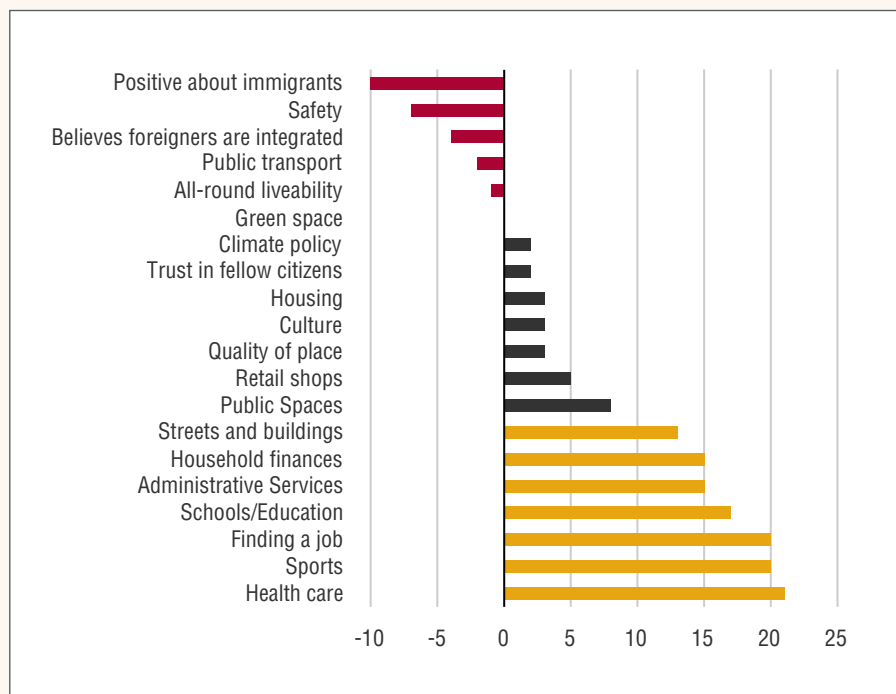


### Brand, identity, and destination

Judged on resident experience, Antwerp in principle has many destination advantages. In the largest survey on European cities, Antwerp's residents are the third most satisfied with the life they lead, behind only Oslo and Zurich. Satisfaction is well above the EU average in the areas of health care, job availability, sporting facilities, schooling, and the quality of government services (figure 8). The main areas of dissatisfaction are with the level of integration of foreigners, public transport, and safety. On this basis, Antwerp has strong appeal to those who live in it, even though many of the city's "users" live outside the city limits and travel in by car.

However, compared with some cities of its size or assets – including Bilbao, Malmo, or Rotterdam – Antwerp does not currently possess a strong international brand or identity. It has a clear and positive identity within Belgium, but there has been limited international focus; the emphasis instead has been on creating a new sense of place for residents. The city's attractiveness for meetings is relatively weak, ranking 134<sup>th</sup> globally, compared with 77<sup>th</sup> for Rotterdam and 63<sup>rd</sup> for Hamburg. A stronger sense of destination is necessary if Antwerp is to combat an aging population and attract the young people it needs. Stronger branding is now a work in progress. The city aims to present itself as a "metropolitan village," with the diversity of an international metropolitan area but at the scale of a village in terms of comfort and quality of life. Until this and future initiatives gain more international traction, brand and identity will not be leading drivers of the city's competitiveness.

**Figure 8: Perception and Satisfaction of Antwerp Residents, Relative to the EU Average, 2016**



Source: EU-Barometer (2016).



## Conclusion and Recommendations

Figure 9 presents a summary assessment of Antwerp according to the competitive framework used in this report. This assessment is based on the analysis presented above (and in the accompanying case study) in comparison with nine peer group cities: Bristol, Gdansk, Genoa, Gothenburg, Hamburg, Lille, Liverpool, Rotterdam, and Utrecht.

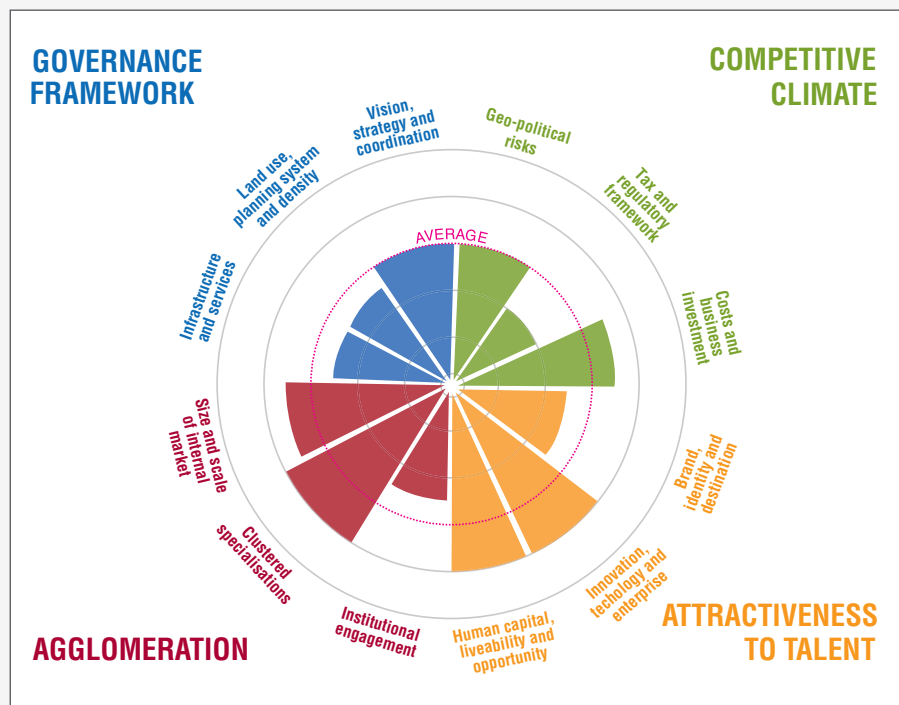
### Competitive assets

Antwerp performs well in the areas of **human capital**, **liveability and opportunity** and **Innovation**, technology, and enterprise. The population is highly skilled, and the city has a diverse economy with many well-established sectors. Opportunities exist to broaden the scale and profile of its most successful creative industries, including fashion, diamonds, and design, while new sectors benefit from private incubators and city initiatives. The digital and circular economies are at the heart of the city's future innovation economy, and promising new sites are being established for digital start-ups and chemical companies.

**Clustered specialisations** are an important strength for Antwerp. The port remains highly competitive, and much of the infrastructure to support its trade growth and logistical efficiency is in development. While Antwerp lacks Brussels's size, assets like the port mean that the **size of the city's internal market** is sufficient to benefit from the effects of agglomeration. Cross-sectoral developments are helping Antwerp's clusters share assets and resources in a way that drives agglomeration.

Antwerp also is above average in terms of **costs of business investment**. The city has improved its cost and incentives climate to build the innovation economy, supported by active engagement from universities and risk capital. Antwerp's benefits from strong leadership, helping score it better than the capital in the category of **vision, strategy, and coordination**. Similarly, its status as a

Figure 9: Evaluation of Antwerp according to 12 Competitiveness Criteria



regional city rather than a host for international institutions means **geopolitical risks** are less of a factor than in Brussels.

### Competitive threats

Two of the biggest threats to Antwerp's competitiveness relate to the city's governance framework. Antwerp is a congested and relatively car-oriented city whose 20<sup>th</sup>-century model of development is not well suited to the competitive and innovative edge it will need to show in the future. A focus on **infrastructure and services**, in particular public transport alternatives, is essential if Antwerp is to scale up its innovation economy and bring forward projects that attract investment. Overcoming entrenched preferences for the private car will be a key part of making public transport developments a success and will help make the city's **land use, planning system and density** more conducive to future growth.

In order to expand its innovation economy, Antwerp must address the risks in the area of **brand, identity and destination**. The city's limited international profile is a potential threat to the growth of its innovation economy. **Institutional engagement**, including engagement with knowledge and business institutions, could be improved. The city has begun to engage private partners in joint ventures, and more will be needed to avoid further decamping from the centre to the green fringes.

Though not to the same extent as Brussels, Antwerp is affected by risks in the area of **tax and regulatory framework**. Governance fragmentation makes financial and development issues unduly complex, and innovative industries could benefit from more access to SME finance.

## Recommendations

This report offers recommendations for how Antwerp can improve its competitiveness in each of the four areas.

### Governance framework

**Metropolitan coordination.** Antwerp has begun regional cooperation around transport. The city will need to build on this by developing robust coordinating mechanisms with surrounding municipalities to develop joint approaches to accommodating and absorbing population growth and managing investment and changes in land uses.

**Metropolitan growth strategy.** Although Antwerp has a clear roadmap for its high-growth clusters, the city needs a guiding economic and spatial prospectus if it is to achieve a step change in the pace and scale of its growth management solutions. This should include agreement on how and where to densify and plans for an infrastructure pipeline that shows how future sub-centres will be connected.

**Transport infrastructure.** At the moment Antwerp is only in position to start catching up with other European cities in transport infrastructure rather than moving ahead of the curve. Investment in smart mobility and real-time monitoring of transport systems could accelerate its progress. The city has to make strategic decisions about what set of tram and light-rail projects to pursue in the future because it needs both radial and tangential lines.

### Competitive climate

**Social cohesion and city living.** Social fragmentation and political disengagement are exacerbated by the fact that many of the city's wealthy professionals live outside the city limits and commute by car.<sup>57</sup> This is an outmoded lifestyle for a city of Antwerp's size and significance. The city has opportunities to engage younger citizens more proactively, including through new infrastructure that enhances their aspiration for city living.



### Agglomeration

**Sector profile and autonomy.** Antwerp needs a resilient, innovation-led economy in the core city as well at the port.<sup>58</sup> Leveraging the port to create a smart logistics economy is an important objective. The circular, digital, and creative economies are critical going forward, but require effective organisation – including stronger linkages with schools, universities, and financial providers – and greater international visibility.

### Attractiveness to talent

**Enhance the Antwerp brand.** Antwerp needs to create the sense of destination that can attract the young people it needs to serve an aging population. Improving the city's own international reputation in tourism, business, and innovation can also provide a shared confidence and purpose.

## Conclusion

Antwerp is operating in, and competing with, a network of increasingly competitive European metropolises that are carrying out their own reforms and becoming more attractive to businesses and investors. If Antwerp is to catch up with its infrastructure deficit and move ahead as a centre of innovation in Europe, it will have to implement changes at a faster pace and a larger scale than in the past.

Antwerp would also benefit from greater collaboration with other major cities in Belgium to build complementary strengths and make Belgium as a whole a more attractive prospect for international investment. Its city leadership has made big strides in recent years and must now move beyond everyday constraints to bring together local, city, regional, and federal bodies around a shared development approach.



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